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BULLETIN OF THE MASSACHUSETTS ARCHAEOLOGICAL SOCIETY



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The Boats Site Collection Returns to the East

Grace Bello

Introduction

The Boats Site is an archaeological site located at the head of tide of the Taunton River, across the inlet from the famous Dighton Rock (Figure 1). For thousands of years this area has been occupied by a myriad of individuals who used it with substantially different motivations. In April of 2014, the Boats Site collection was trucked cross country by Mr. David DeMello, Director of the Robbins Museum of Archaeology, and Mr. Fred Robinson, then Vice President of the Massachusetts Archaeological Society. The collection was being

Rose. Rose, with a team of avocational archaeologists, excavated at the Boats Site for a total of 17 years from 1948 to 1965. He published two separate articles about his findings in previous *Bulletins* of the Society. (Rose 1953, 1965).

When the collection finally made its way back to Massachusetts, artifacts from more than just the Boats Site had augmented it. Rose was a constant collector even after he had finished digging at the Boats Site. The size of the collection had been nearly doubled by the artifacts that Rose and his son had collected for over 50 years. Unfortunately what was lacking from the collection were Rose's excavation notes.

During the summer of 2014, Fred Robinson and I separated out the material from the collection that had been actually excavated from the Boats Site from other material Rose had collected over the years. Exactly 2,863 of the smaller artifacts, such as projectile points and pendants, are very skillfully sewn onto 49 different cloth panels that are separated in chronological order of excavation noted by the number that is on each panel. (Figures 2 and 3) The rest of the collection is separated into three additional boxes which consist of loose ground stone tools, such as hammerstones, pestles, plummets and sinkers. The last set of the collection is glued onto large wooden frames; these consist mostly of broken projectile points, and broken semi-lunar knives.

Results

Over the summer of 2014, I determined that there were a total of 3,602 artifacts just from the Boats Site in Edward Rose's collection, and a total of 5,363 artifacts in the entire collection. From this point onward, only the artifacts from the Boats Site will be referenced. A total of 84.8% (3,057) are projectile points; 5.1% (187) are knives; 5.1% (184)

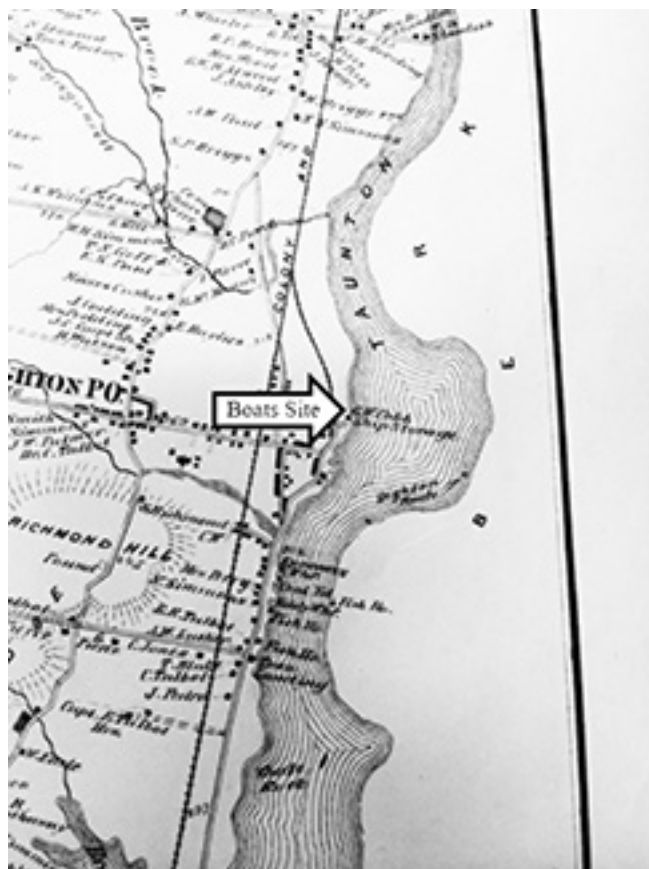


Figure 1: Location of the Boats Site Shown in an 1811 Depiction of Dighton Massachusetts (after Taunton Historical Society 1811).

donated to the Robbins Museum of Archaeology by the family of the original excavator, Edward

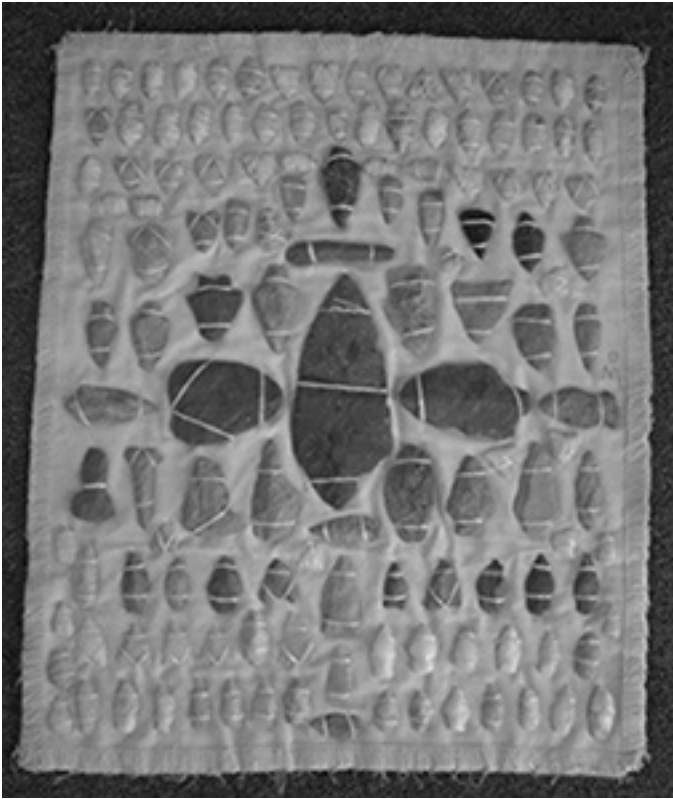


Figure 2: One of the Cloth Panels Holding Artifacts from the Boats Site

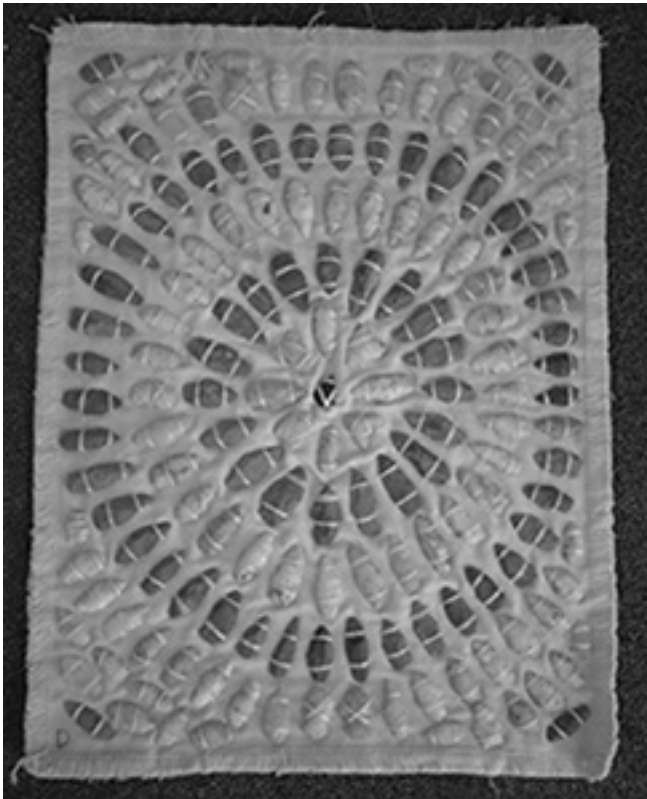


Figure 3: Another of the Cloth Panels Holding Artifacts from the Boats Site

are scrapers; and 1.97% (71) are perforators. The remaining 3.03% (103) is made up of flakes (30), plummets and sinkers (29), atl-atl weights (8), gouges (7), pestles (6), spokeshaves (4), steatite

bowl fragments (4) celts (3), pendants (3), axes (2), gorgets (2), crystal matrices (2), a hoe, a hammerstone, and one fossilized imprint. These percentages are shown in Figure 4 below.

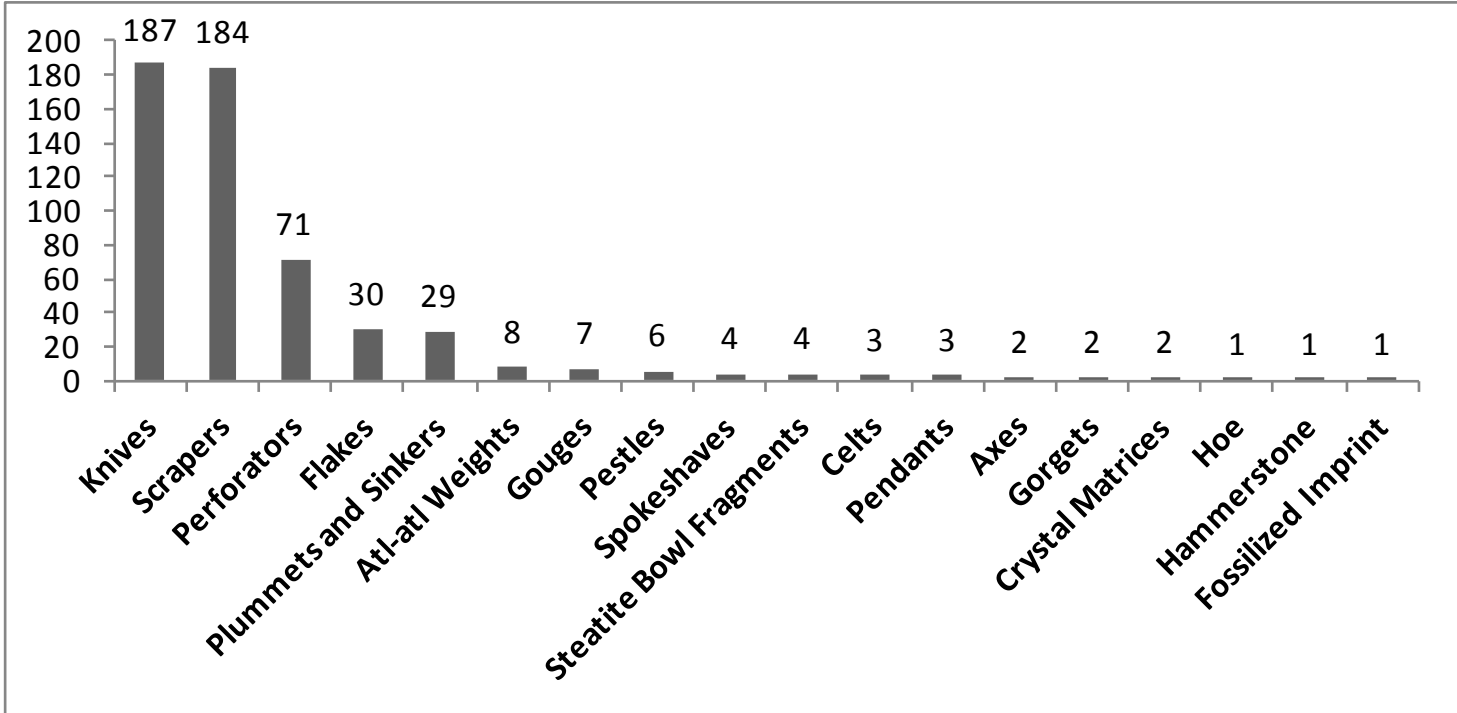


Figure 4: Non-Projectile Point Tools from the Boats Site

Atlantic	109
Bare Island	84
Beekman Triangle	48
Brewerton Corner Notched	31
Brewerton Eared Notched	74
Brewerton Eared Triangle	139
Greene	67
Lagoon	46
Levanna	69
Mansion Inn	31
Merrimack	137
Neville Variant	36
Normanskill	38
Orient Fishtail	48
Otter Creek	30
Rossville	224
Snappet	59
Squibnocket Stemmed	892
Squibnocket Triangle	470
Stark	91
Susquehanna Broad	61
Vosburg	52

Figure 5: Major Projectile Point Types (N > 30)

Bifurcate	11
Boats Blade	3
Brewerton Side Notched	17
Broken Tip	16
Clovis	1
Coburn Stemmed	1
Eden	3
Fox Creek Lanceolate	25
Fox Creek Stemmed	10
Hardaway Dalton	10
Hardaway Side Notched	1
Jacks Reef Corner Notched	7
Jacks Reef Pentagonal	9
Madison	4
Meadowwood	14
Neville	11
Outre Passé Flaked Point	2
Perkiomen	8
Poplar Island	1
Stanly	1
Wayland Notched	16

Figure 6: Minor Projectile Point Types (N < 30)

From my classification, in the Fall of 2014, I was able to determine the following results about projectile point types. The percentages of these types with their lithic associations are shown in Figures 5-9.

There is a high percentage of projectile points as compared to other tool types that are present in the collection. After discussing this with Dr. Hoffman (personal communication 2015), we came to the conclusion that there was some collector bias during the excavation of the Boats Site. In our discussion, we talked about how at typical archaeo-

logical sites in the Northeast the projectile point assemblage is usually in the range of 70% or less and the percentages for other tool types are much higher. Also, due to the time of digging and the personal methodology of the excavators, I find it reasonable to conclude that the excavators did not collect all of the flakes, hammerstones and other stone tools. Rose also let the excavators who helped him take home some artifacts that they had found themselves. This is the reason for a missing fish effigy, and the lack of the some ten hammerstones from the collection that are mentioned in the publications.

arkose	2
basalt	49
biotite	1
chert	40
coalstone	1
felsite	843
gneiss	6
granite	1
granodiorite	61
gray argillite	634
hornfels	94
indurated shale	4
intrusive argillite	3
muscovite	1
orthoclase	6
phyllite	15
pink quartzite	2
quartz	1446
quartzite	249
saugus jasper	5
shale	20
steatite	12

Figure 7: Projectile Point Lithic Types

Attleboro red felsite	130
black felsite porphyry	136
blue felsite	1
gray felsite porphyry	286
Hignham red felsite	70
Kineo felsite	92
light felsite	7
Mattapan felsite	40
patinated felsite	1
pink felsite	1
purple felsite porphyry	3
red felsite	20
red felsite porphyry	36
tan felsite	1
unspecified felsite	19

Figure 8: Breakdown of the Felsite Lithic Types

black chert	24
brown chert	5
dark brown chert	2
gray chert	2
light brown chert	1
purple chert	1
red chert	2
unspecified chert	3

Figure 9: Breakdown of the Chert Lithic Types

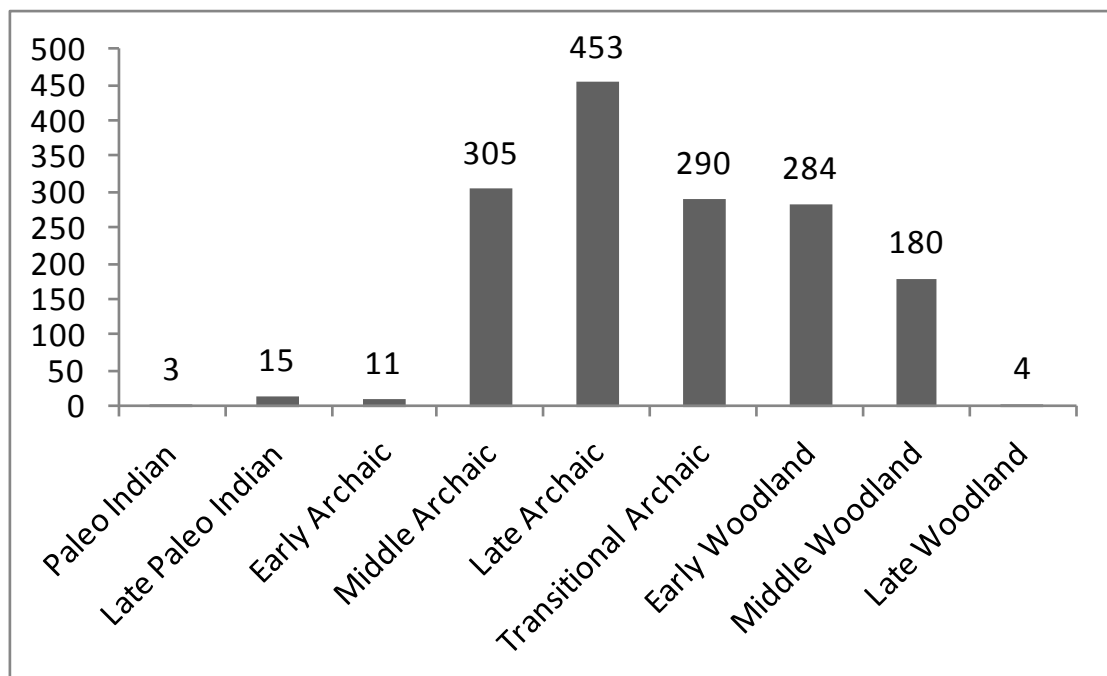


Figure 10: Frequency of Projectile Points for Each Period

Discussion

According to both the records from the Massachusetts Historical Commission, the records from the Massachusetts Archaeological Society's Library and Dr. Hoffman's stone structure study, there are seventy two sites within a five mile (eight kilometer) radius of the Boats site recorded. These sites range from historic sites, to surface find sites, to CRM data recovery sites such as Titicut. (MHC personal visit March 31).

Originally, Edward Rose classified the Boats Site as having been occupied from the Early Archaic to the Middle Woodland period. I would disagree with his judgment because the evidence presented above in Figure 10 shows all of the projectile points and their associated time periods found at the Boats site. The presence of Hardaway-Dalton, Eden, Clovis and other *outré-passé* flaked points would suggest that this site was occupied for a short time during the Paleo Indian period. Due to the presence of such a small number of points and a small variety of lithic types (shown in Figures 11-13), I would argue that these occupants of this site were only present at the Boats Site for a hunting camp or maybe overnight for a river trip. Due to the high elevation of the Boats Site above the approximate sea level of around 12,000 years ago (about 25 feet higher if the assumed sea level of the time was around 100 feet out from where it is today), this area would have been a prime high spot for a hunting camp. (Braun and Braun 1994) Natives during this time would have moved a lot to follow the herds of game, and would have been hunter-gatherers.

Because Rose did not think that the site was occupied during the Paleo Indian or Late-Paleo Indian periods, there is no mention of these points in his publications, except for a small drawing of an *outré pas* flaked point in a later publication by William Fowler. It is possible he did not recognize these types of tools from this early time period or that he was under the assumption that these artifacts also belonged to a later time period. In his article in Volume 31 of the *Bulletin of the Massachusetts Archaeological Society*, Fowler describes a third excavation carried out by Rose during 1965, an excavation closer to the second excavation higher on the knoll of the Boats Site (Fowler 1968). During

Material:

tan felsite	1
granodiorite	61
granite	1
muscovite	1
biotite	1
coalstone	1
saugus jasper	5
arkose	2
gray argillite	654
attleboro red felsite	130
basalt	49
black felstie porphyry	136
blue felsite	1
unspecified felsite	19
gneiss	6
gray felsite porphyry	368
hingham red felsite	70
hornfels	94
intursive argillite	3
Kineo felsite	92
light felsite	7
mattapan felstie	40
orthoclase feldspar	6
patinated felsite	1
phyllite argillite	15
purple felsite porphyry	3
quartz	1446
quartzite	249
red felsite	20
red felsite porphyry	36
Total	3518

Figure 11: Local Lithic Types from Both Glacial Drift and Bedrock Found at the Boats Site

Material:		Source:
steatite	12	Rhode Island
brown chert	5	Linerock Rhode Island
pink felsite	2	Ossipee Mt. NH
pink quartzite	3	Nashoba Thrust Belt MA
Total	26	

Figure 12: Regional Lithic Types and Their Original Localities

Material:		Source:
shale	20	Central New York
black chert	24	North of Albany NY
dark red chert	4	Central PA
dark brown chert	3	Eastern PA
gray chert	3	Northwest NY
light brown chert	1	Eastern PA
purple chert	1	North of Albany NY
red chert	2	Eastern PA
Total	58	

Figure 13: Exotic Lithic Types and Their Original Localities

this excavation Rose had found a few Bifurcate Base points, quartz Stark points as well as semi-lunar knives and the small broken *outré-passé* flaked point mentioned above. I found this point in the collection, and it is definitely from an earlier time period than the Early Archaic.

For the Early Archaic period, Rose mentions the presence of people at the Boats Site. As mentioned below, there are only a few projectile points associated with this time period. But Rose does mention hammerstones, semi-lunar knives and many versions of end scrapers in his publications (Rose 1953, 1965). On both ends of the site there is evidence of bifurcates and other artifacts that Rose considers to be in the "lower zone" which he classified as the Early Archaic locality. During this time, sea level had not yet stabilized off the coast of Massachusetts. Due to the evidence of archaeological sites from all cultural periods located along the Taunton River, I would theorize that the Taunton River was at its current location during the past 12,000 years. Due to the small number of artifacts found at this site at the "lower zone" locality as compared to other time periods, this site appears to have been occupied as part of a seasonal round. These people would have occupied different sites throughout the year but would have had a more constricted area of travel than during the Late Paleo period about one thousand years previous.

There are many different sites within a three mile (five kilometer) radius up and down the Taunton River north and south of the Boats Site. The sites with documented Early Archaic occupations used

Bifurcate Base points. At the Boats Site, semi-lunar knives were found in association with Bifurcate Base points, "Corner-Removed #8" (or Stark or Neville Variant) points, with plummets, and expanded drills all associated with this time period. Although some of these artifacts are connected to the Middle Archaic, their association with the Bifurcated points in pit features could connect them to the Early Archaic time period. These artifacts were also found together with similar lithic types (quartzite, Attleboro red felsite for the points and granodiorite for the knives and drills) at three other sites close to the Boats Site. Titicut, Seaver Farm and Peace Haven all have similar patterns of artifacts that are associated with the Early Archaic. (Rose 1953, 1965; Dodge 1962; Robbins 1967; Athearn et al 1980) Although Titicut and Peace Haven had the same types of artifacts as the Boats site, Seaver Farm had Bifurcates as well as similar projectile points to the other three sites, but it only had a leaf knife instead of the semi-lunar knives present in this occupation at the Boats site. These artifacts were found at the bottom of pits. These sites are within a three mile (five kilometer) radius. Although there is little evidence to show the occupations at these sites during this time period, I am speculating that a similar set of peoples would have moved from place to place, possibly following the migrating herds during the season changes, or they could have been fishing in the spring for anadromous fish that would travel upstream. Due to the high elevation, these people would have had a high vantage point not only for watching the movement of the larger animals but also for a place to camp after possible fishing.

During the Middle Archaic (8,000- 6,000 BP), there is an obviously larger occupation at the Boats Site with a much larger number of artifacts, 305, compared to the 11 from the Early Archaic. This could mean a few different things: perhaps the area was occupied for a longer amount of time just once, or perhaps it was occupied as a campsite on multiple occasions and was returned to many times. The latter is more likely in accordance with the patterns of the time period. Though there are not many very large sites with a large number of artifacts within the local focus of the Boats Site area, there are sites with higher occupation at other

times that show evidence of occupation during the Middle Archaic. Sweets Knoll and Bear Swamp 1 have artifacts that are associated with the Middle Archaic, but their assemblages are not great enough to make a direct comparison to the Boats Site. (Robbins 1967; Barnes 1972) Both of these sites show evidence of a few Stark points, but this is not enough to compare to all the different points from this occupation of the site.

Due to the lack of notes of Rose's excavation, I cannot definitively say where these projectile points were found or what other artifacts they were associated with at the site. This could possibly mean that the Boats Site could have been more of a central place for the people occupying this site during this time than the other sites. This could mean that these other sites were only occupied very sparsely during this time period and the Boats Site was a more central campsite for these people during this time period.

During the Middle Archaic, the nomadism of peoples was very similar to that of the Early Archaic. But because of the higher use of lithic types that are local to the area I would theorize that the people who occupied this area had been returning back to this camping ground year after year. These people began to use argillite, which is the local bedrock, in great abundance, as well as other lithic types that could be found in ground moraine cobbles from the glacial drift. But these people did bring in some exotic material. There is evidence of black chert for projectile points in this period. Due to the small number of artifacts of this lithic type being represented in the collection for this time period, I would theorize that the people who occupied this land during the Middle Archaic were occasionally travelling far to follow their yearly round of hunting and gathering following the seasons. The black chert could be from central New York State, so these people might have travelled much farther inland for the winter months where the resources were less scarce for both the herds they were hunting as well as themselves. Then they would return with the herds east closer to the coast during the spring and summer months to fish in fishing runs in the spring. This is when these people would return to their familiar camping site (on a hill above a slight valley), possibly for many years.

The Late Archaic occupation at this site was a much more intense habitation than any other time period. Rose discovered not only a large number of ground stone tools at the site associated with this time period, he also discovered the first appearance of ceremonial uses of the Boats Site. Rose discovered not only many hearths, but hearths that were decorated in interesting ways. There is evidence of hearths that have ground stone tools placed around the edges of their rims. These tools at two of the hearths were broken pestles, and the largest of all the hearths was surrounded by grooved weights as well as having five grooved weights under the hearth feature. These artifacts could have been ceremonial and decorative or simply old tools from prior occupations that do not have much use-wear.

This is easily comparable to other sites close to this one; sites such as Sweets Knoll that has a large number of hearths that had broken pestles around the rim of the pit, which is the same type of decoration at the Boats Site hearths. (Robbins 1955) A lot of the Late Archaic artifacts were from Rose's second excavation on the southern end of the site, farther up the knoll. Along the ridge of this knoll, parallel to these hearth and pit features, there was one large glacially laid boulder at the base of which was the small granodiorite fish effigy that is shown in Figure 14. This effigy has some similarities to a bird effigy from the Sweets Knoll site, which is shown in Figure 15. Birdstones are associated with the Early Woodland time period (Fowler and Hoffman 1991), so this information is rather equivocal; I am only mentioning it because of its presence at Sweets Knoll. Both of these sites have similar assemblages as well as features and a



Figure 14: The Fish Effigy from the Boats Site (from Fowler 1968)



Figure 15: The Bird Effigy from the Sweets Knoll Site (from Robbins 1955)

similar time frame of expanded occupation. Robbins also made a comparison between the artifact assemblages from the Sweets Knoll Site and the Boats Site, from the horizon he called the “middle” at Sweets Knoll. He found that “eared points occur in both while large triangles and pottery are absent.” (Robbins 1955)

During the Late Archaic period, there was a large population growth in New England (Plymouth Archaeology Rediscovery Project 2015) as well as an increase in variability of tool types; the Natives would have been using a variety of ground stone tools such as mortars and pestles. Around this time, Braun and Braun (1994) posit that the people who occupied this area would often gather in large camps on the coast in the fall, and in the winter would move inland into the woods, and then in the spring would have hunting camps along the rivers, then into the marshes during the summer. During this time period the sea level was also beginning to stabilize, which would explain why there are shell heaps at the Boats Site as Rose mentioned in his second publication on the Boats Site. (Rose 1965) Because of the number of plummets and sinkers Rose associated with this time period in his publications, this could suggest that this site was occupied during the Late Archaic during the spring, both due to the evidence of shell heaps, and plummets and sinkers. Because anadromous fish travel upstream during the spring to reproduce, this was a good time for Natives to fish. Also because of the odd rock-and-hearth formations, as well as many utilitarian tools at this site, I would suggest that this site was used for ceremonies as well as preparation for future hunting, fishing or even preparing tools for the ceremonies during the Late Archaic period.

The Transitional Archaic time period, although it had a smaller number of projectile points associated with it, was definitely the most interesting time period for the Boats Site. During the first excavation of the Boats Site, Rose dug what he determined to be a human cremation burial. (Rose 1953) The pit for the burial was filled with red ocher and a mixture of fine-grained materials of what he presumed to be quartz, along with many broken pestles, ground stone tools, large projectile points, broken projectile points, a dark accumulation of soil (Rose details this as the cremation), and some human bone fragments. Among the large projectile points is the famous Boats Blade shown in Figure 16. None of these bone fragments were returned with the collection. Around this pit there were other pits filled with similar assemblages, except there was a lack of human bone fragments, as well as of the dark mass, in any of the other pits. It is possible that these pits are for funeral offerings. According to Dr. Barnes, in some cultures when important people die, various people and groups will bring offerings in honor of the individual, and the burning could be the mechanism of sending these items to the next world. (Personal communication 2015) If each group or individual burned their offerings, this pattern would be created.

Rose did find fragmented animal bone in some of the other pits, but not in the dark mass. What was lacking in these ceremonial pits was charcoal, or he did not report it in his few articles, and none came back with the collection. So it may be theorized that the actual cremation occurred in one of the surrounding hearths; then the remains were moved into each of the different pits. In this excavation he also discovered other features such as hearths and refuse pits that were mixed among the other ceremonial features.

This type of assemblage of features can be associated with other sites in the surrounding area, but only based on the layout of the pits, not the actual burial. Although Titicut, Seaver Farm, and Bear Swamp all had burials, none of these locations had exclusively cremation burials. At Titicut and Seaver Farm, the burials that are not cremations are all

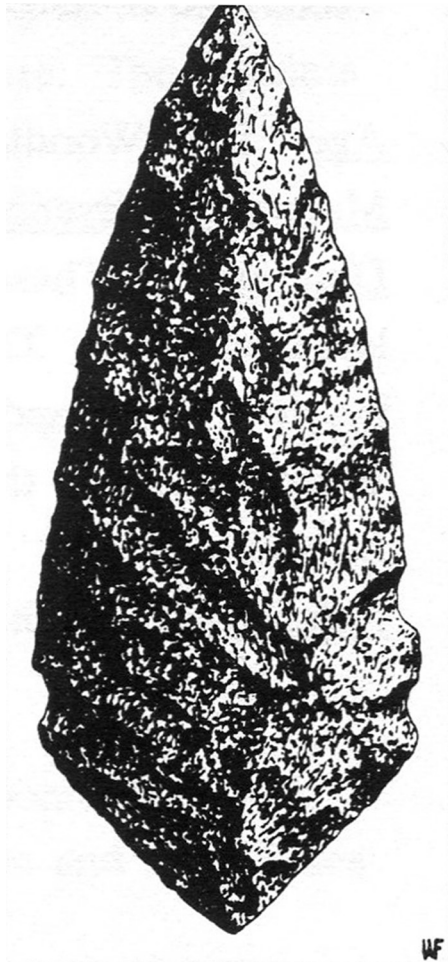


Figure 16: The Boats Blade (from Fowler/Hoffman 1991)

Contact period burials. The red ocher and quartz ground mass are similar types of deposits to those of the pit features at the Peace Haven site just two miles (three kilometers) south down the river from the Boats Site. However, the C14 dates from this site are a bit earlier. Although Rose does not go into as much explanation as Athearn et al.(1980) do about the pit features, there is a possibility that these two sites could have been occupied by similar peoples throughout this time period. Dr. Carol Barnes has theorized that sites such as Peace Haven, with many different foci of occupation, had been occupied at different times during the year, moving in accordance to the weather. (Personal communication 2015; Barnes 1972) If there had been more evidence from Rose's excavation I would be able to make a hypothesis about the movement upstream, not only to a higher elevation but also to a location where the head of tide of the Taunton River is located for ceremonies, then

back down the river for better access to different resources throughout the year. But because of the lack of notes from Rose, this is all speculation.

The three Woodland Periods and the Contact Period will be discussed together. From the Boats Site there is a large number of lithic types from the local area, but there is also evidence of lithics from non-local sources. By the time the Woodland period started around 2,700 BP, the population of North America had grown large enough for trade routes to start developing. However these trade routes would probably have developed more in the Middle and Late Woodland because, for unknown reasons, during the Early Woodland there appears to have been a heavy decline in population. (Braun and Braun 1994)

From the Boats Site collection there is evidence of both exotic materials and sedentism during this period. The percentage of exotic materials does not increase, but the fact that these materials exist in the collection and are used for artifacts connected to this time period would suggest one of two outcomes. First, these people could be travelling all the way to Pennsylvania to gain their materials, which is unlikely because they would have no need to in terms of resources. This is because people who occupied this area during this time would have adapted to their environment and would be self-sustaining enough that they would not need to travel all the way to Pennsylvania following their food source, which is a reason the earlier peoples might travel so far. (Braun and Braun 1994) The second reason is more likely. This is that there were trade routes that connected peoples across great distances by their possessions. Because the people of this time would have stayed in one area for a much longer period of time and would possibly live close to their birthplace their whole lives, this suggests that there was more trade during this time.

Rose also discovered that there were eleven post molds that were associated with the Middle Woodland period. These molds were found all at the same depth of 8-10 inches deep (20-25 centimeters), which was stratigraphically above where the other artifacts from older ages were found. (Rose 1953) He found that there was no hearth feature

within these molds but he did find that they were in a square shape, unlike the typical wigwam, which is circular. If I had access to soil samples from this feature, I would possibly be able to hypothesize about the use of this structure; it could have been a rack for drying and smoking fish; or a display place for offerings used in ceremonies; or a booth location to display tradable items. But without more data, the use of this structure is impossible to discern.

Rose did theorize that this shape was slightly larger than the typical size of a wigwam of the time period. Rose describes how this "wigwam" was rectangular, which contrasts with the wigwams that were found at the Fort Hill site, described by William Taylor. (Taylor 1976) At Fort Hill, there were many post molds found in circular patterns that were concluded to be wigwams; these wigwams were on the outside of what was interpreted to be a fort, which was a rectangular shape. I could make a comparison between the two rectangular shapes of the enclosures from Fort Hill and from the Boats Site, but the fort at the Fort Hill site is double the length and width of the enclosure found at the Boats Site. The fort was over 40 feet long and over 30 feet (10 m) in width (Taylor 1976); so a theory that the "wigwam" from the Boats Site could have a connection to the Fort Hill site is very hard to make.

Rose also found that there was no hearth feature within the limits of the "wigwam", but that there was an odd occupational layer that was thickest at the center of the "wigwam" at 14 inches (25 cm), then tapered at the edges to about 2 inches (5 cm). (Rose 1953) As I have found from Helen Lane's *A History of Dighton*, there were diaries written by some Pilgrims who travelled inland to the Wampanoag villages that were still standing which documented that they needed to step down into their homes. This documentation would suggest that if the wigwams were set into the ground by around 12 to 24 inches (15 – 30 cm), then it is possible that this occupational layer is from the structure being set into the ground in such a way that the use of the area closest to the walls was much less than that of the center. The people who occupied the Boats Site at this time would have been more sedentary than in previous periods, possibly only moving a few miles from camp to camp depending on resources. Due to the shell heaps that were also associated with this time period from the Boats Site, there is a large possibility that the site was occupied during the spring months as a fishing camp.

Closer to the time of contact with the Europeans there was a plague that ransacked the Native population, which may have been the cause for the abandonment of the Boats site. (Marr and Cathey 2010)

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A Glacial Erratic “Quarry Boulder” on Martha’s Vineyard

William E. Moody

When the Wisconsin glacier finally began its retreat from southern New England some 21,000 years ago (Oldale 1992:39), the landscape had been dramatically altered. From eskers and moraines to glacial outwash plains and kettle holes, many geographic features had once again been “made new” by the powerful grinding forces and immense weight of the ice sheet, which may have stood as much as a mile high at its peak.

By 12,000 BP, for the first native peoples traveling through the present-day island of Martha’s Vineyard, one of the clearly visible changes that awaited these early explorers would have been the large erratics—the huge boulders—that had been transported many miles by the glacier, sometimes hundreds of miles, and then haphazardly strewn across the landscape in the wake of the slowly retreating ice. At times through natural forces, some of these boulders exhibited very unusual and even animistic shapes. There would doubtless have been some spiritual significance attributed to them by the pre-European inhabitants (Figure 1).



Figure 1. Glacial erratic boulders. West Tisbury, Martha’s Vineyard

And without question, there would also have been other sizable boulders that provided ready sources of good quality tool stone for the early people as they made their way onto this previously unknown landscape.

The presence of one such glacial erratic on Martha’s Vineyard, which might be termed a large “quarry boulder” was discovered by the author nearly ten years ago. Situated at the terminus of the last glacier, Martha’s Vineyard lies just off the southern coast of Massachusetts and somewhat west of Cape Cod. The island is incredibly rich in lithic resources deposited by the melting ice sheet. The highly varied beach cobbles, for example -- ranging from high grade quartz and quartzites to



Figure 2. Various cobble cores from Martha’s Vineyard, exhibiting evidence of reduction as tool stone by early inhabitants. Recovered May 25, 2014, in a small area along an eroding coastal site.

the many different felsites, rhyolites, argillites and hornfels, among other usable tool stones -- have all been identified in the glacial drift (Figure 2). Add to this the many larger boulders dotting the landscape, and the native inhabitants certainly had no shortage of lithic resources readily at hand. One example of long distance glacial transport of material found on Martha's Vineyard is Kineo felsite, which has its original source at Mount Kineo on Moosehead Lake in the Highlands Region of west central Maine.

The particular "quarry boulder" in question (Figures 3, 4) was found in an agricultural field not far from a large saltwater embayment that is fed by a number of freshwater springs. The embayment



Figure 3. Quarry boulder, facing north.

itself may well have been a freshwater lake prior to the time that the island of Martha's Vineyard became separated from the mainland by rising sea levels approximately 6,000 years ago. Robert Oldale observes: "Marine waters entered the deeper parts of Vineyard Sound approximately 7,500 years ago and flooded Nantucket Sound about 6,000 years ago. About that time the Islands [Mar-

tha's Vineyard and Nantucket] became separated -- from each other and from Cape Cod, and sea level continued to rise" (Oldale 1992:100).



Figure 4. Quarry boulder, facing northwest.

When the quarry boulder was first discovered by the author, only its very top surface, measuring over 3.3 m across, was exposed and visible some 20 to 30 cm above ground level. Although at that time it was not possible to determine just how large the entire boulder was, it was clearly large enough that the farmers for several generations had to leave a wide swath around the boulder as they plowed the fields each spring. It was also apparent that this particular glacial erratic had been quarried in pre-Contact times. A number of worked pieces, some large and some small, which had been removed from the boulder by human hands were recovered by the author at various visits to the site over the years (Figure 5). These included a fist-sized hammerstone (Figure 6) shaped from the boulder itself and which may have subsequently been used in further reducing the quarry boulder. The lithic material appears to be a flow-banded rhyolite or felsite, with the bands tending towards a reddish

color with a lighter tan color interspersed. (Figure 7). It is visually similar in many respects to what is locally known in southeastern Massachusetts as "Hingham red" felsite.

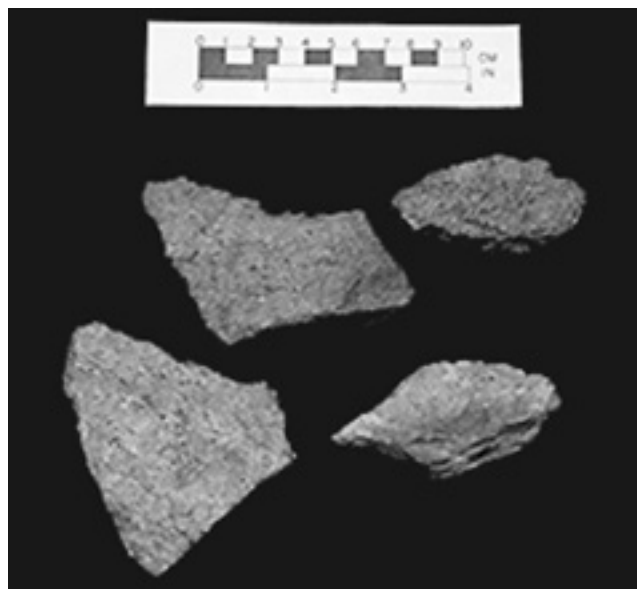


Figure 5. Samples of tool stone removed from quarry boulder.



Figure 6. Hammerstone manufactured from quarry boulder in pre-Contact times.

In the winter of 2014-2015, new agricultural field clearing activities began, which included the removal of a number of mature trees in the northeast corner of the property. During this work, the large boulder was extracted from the ground by heavy



Figure 7. Large block removed from quarry boulder in pre-Contact times

equipment and moved to the edge of the field. It was at this time that the author was able to take measurements of the boulder and make a photographic record.

Of course no possibility now exists in determining the actual size of the original erratic when it was first deposited in prehistoric times and prior to its initial discovery and subsequent utilization by Native American stone tool makers. Yet what remains today of the quarry boulder stands roughly 1.5 m tall by 2.6 m long by 2 m wide.

It should also be noted that within 7 m of the boulder a number of additional artifacts have been recovered by the author. These included projectile points (Figure 8) and edge tools, as well as significant debitage from various other lithic sources. Several specific locations on this particular farm have been recognized since at least the 1950s for pre-Contact sites (Huntington 1959), including apparent habitation areas, shell middens and lithic workshops. The immediate area surrounding the quarry boulder adds one more discrete site to the known inventory.

A further note of interest is that due west of the quarry boulder, less than 100 m distant in the same agricultural field, there exists another defined area that exhibits pre-Contact lithic reduction activities involving a separate, much smaller boulder. Over the course of several years, the author surface collected a significant amount of material in an area of approximately 4 square meters. The lithic samples are a variety of felsite exhibiting phenocrysts



Figure 8. Sample of projectile points recovered near quarry boulder.

and which unquestionably came from one single boulder of that same material. The lithic material has become heavily patinated to a light gray to light tan color. Where more recent breaks in the stone caused by agricultural activities can be viewed, the interior of the stone can be seen to be a dark black felsite with light colored phenocrysts, possibly sourced from the Marblehead formation north of Boston (Skehan 2001:217). To date, a total of 87 pieces of worked stone of this material, with a total weight of approximately 5.4 kg has been surface collected (Figure 9). The size of the worked stone ranges from an edge tool measuring 15.5 cm long by 7.5 cm wide to flakes of 2.5 cm or less.

Finally, as this article was being prepared, the author was surveying another nearby site on an adjacent farm. In May of 2015, a small field had recently been plowed, and a number of artifacts were recovered. These included two small blocks of stone which had clearly been removed from the large quarry boulder that is the main subject of this discussion. Also recovered was a Rossville projectile point (Boudreau 2008:39) visually identical to the same flow-banded lithic resource. (Figure

10) This additional site is located some 600 m to the east of the quarry boulder, and the fortuitous recoveries here would lead to the likely consideration that the lithic material from the quarry boulder would be present at other nearby sites as well.



Figure 9. Lithic debitage and edge tools recovered from second glacial boulder.



Figure 10. Rossville point, lithic material visually identical to quarry boulder.

Conclusion

The discovery of this glacially deposited quarry boulder and other nearby lithic reduction activities indicates some of the varied opportunities afforded early inhabitants in southern New England

to utilize stone tool-making material that came readily to hand as a result of long distance transport by the Wisconsin ice sheet. The observations and information obtained add another page in the wide-ranging study of lithic procurement and use patterns during prehistoric times.

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Changes in the Social, Symbolic and Economic Uses of Wampum In Southern New England as a Result of European Contact

Emily Rux

Introduction

The period of contact between Europeans and Native Americans of southern New England was followed by sweeping changes in the way of life for the native communities. One example of this is how the use and meaning of wampum changed from its social, symbolic and ceremonial uses prior to the Contact Period into that of a

commodity and then a standardized form of currency in the fur trade. In discussing these changes I will draw from oral tradition, historical accounts and the archaeological record for support.

For the purposes of this article I am defining southern New England as the land contained within the borders of Massachusetts, Rhode Island, and Connecticut as well as eastern Long

Island. The main tribes that inhabited this region prior to European contact were the Massachusetts, Wampanoag, Narragansetts, Mohegans, Pequots, Nehantics, Nipmucks, Pocumtucs and on Long Island, the Montaukett and Shinnecock (Ceci 1990; Speck 1974; Starna 1990). Within these tribes were many smaller bands. These nations all belong to the Algonquian language group (Weinstein 1994). Though they were not located in southern New England, I will be including a brief note concerning the Mohawks of the Iroquois Confederacy, as they were an integral part of the wampum trade as well.

The definition of the Contact Period varies slightly depending on the source. I will split the early Contact Period into three categories. The first is the period of first contact and reconnaissance, which began with the travels of Giovanni da Verazano, to the beginnings of the fur trade, 1524-1608; the second is the period of increased contact and the beginnings of colonization, 1609-1624; the third is the post-contact period, of increasing control and the development of the wampum trade, 1625-1700.

Discussion

Wampum is the word used to refer to the purple and white beads produced in and around New England; this is a misuse of the word that began during the Contact Period. It is an Algonquian word meaning white. Suckauhock is the Algonquian word for the black or dark (purple) colored beads and me-teauhock is the word for white beads (Brady 2001; McBride 1994). White wampum are cut from the columella of knobbed whelk (*Busycon carica*) and channeled whelk (*Busycon canaliculatum*). The outer portion of the shell was broken and removed, leaving the central whorl, from which the white beads were sliced. Purple wampum, also referred to as black or blue, and were made from the quahog shell (*Mercenaria mercenaria*) (Ceci 1990). Rectangular blanks were cut from the purple "eye" of the quahog, the area of the shell where the muscle is attached. The bore was then drilled into the blank using a pump, or bow, drill with a chipped flint drill bit that would hollow out the center of the blank (Ingersoll 1883). The blanks were strung

on line made of deer sinew or plant fiber and worked in the grooves of a grinding stone until the edges were smoothed, rounded and uniform. Whelk and quahog are both plentiful in the bays along the coasts of Connecticut, Rhode Island, Cape Cod and Long Island Sound and were collected in the summer and produced in the winter (Russell 1980:112; Speck 1974).

There are two styles of wampum beads that were made, discoidal and cylindrical. The disc wampum were made prior to European contact. Cylindrical beads were manufactured prior to and after the Contact Period. The discoidal were not as small and did not exhibit the uniformity of later beads which have been referred to as "true" or "council" wampum (Slotkin and Schmitt 1949). These are the small cylindrical beads of uniform shape and size that come to mind when one hears the word wampum; these evolved with the introduction to iron drills by European explorers (Speck 1974).

There are many uses for wampum which have been recorded in both the oral and written histories of the Algonquian speakers of southern New England. Early explorers in the region, such as Roger Williams and William Bradbury, describe its use as adornment (Brady 2001). It was strung and worn as bracelets and necklaces, woven into women's hair and worn as belts (Nassaney 2004; Slotkin and Schmitt 1949; Speck 1974). It was noted that the families of higher status wore capes, aprons and scarves heavily decorated with the purple and white beads. European explorers also associated the purple wampum with sachems.

Wampum was given as a gift or an item of exchange on many social situations. It was given as a gift of celebration or bereavement. It was used as recompense for the services of a shaman or as tribute to a sachem. Wampum was used to secure a ransom, as a bribe for murder or to compensate for a crime committed by tribal member against one of their own or a member of a different tribe (Nassaney 2004). It could be used to bring and secure peace between tribes and as an incentive for war. It was also used as a trade item with inland communities, such as the Iroquois who prized it heavily but did not have access to the raw materials. Wampum was also used as a prize in games

or sporting events as well as for gambling (Russell 1980:111). When given as a gift or in an exchange there were specific guidelines and ceremony to fulfill. For example, when a sachem received a tribute of wampum he then had an obligation to that person (Starna 1990).

Wampum was an important symbol in both inter- and intra-tribal politics. Its use in council proceedings has been well documented. When a meeting was being called, a messenger was sent out carrying strings of wampum. These functioned as a symbol for both the legitimacy of the message and as a certificate of authenticity (Speck 1974). It would be used to seal and confirm a political decision that was made and would be widely distributed as a reminder of an agreement (Russell 1980:112). Wampum's use as a trade commodity served as a means to maintain contact and communication between groups that might otherwise be hostile towards each other (Haviland and Power 1994).

In the thanksgiving rites of the Narragansett it was thrown into the fire with other sacred objects as an offering to the Creator (Weinstein 1994). The use of wampum as part of the marriage ritual has also been recorded, though its specific use varies dependent upon the author; this may reflect the variability of use among the different groups. It is said to be given by a suitor to either the intended bride or her family (Speck 1974); to be given on behalf of the suitor by a village elder, to the family of the bride; and to be given as a symbol of commitment and to finalize the union (Slotkin and Schmitt 1949).

Wampum was of special ceremonial importance to the Mohawk who lived in eastern New York, as it was tied to the legend about the formation of the Iroquois Confederacy. Deganawidah brought peace through the exchange of wampum (Ceci 1990; Speck 1949). It was used prominently in the Requickenning Address, a part of the Condolence Council when a chief had passed and a new one was to be named. There were fifteen "matters" which were recited. For each there was a wampum string, and each had a specific color pattern associated with it (Trigger and Sturtevant 1978:437-440).

The Algonquians believe that the social and spiritual world are interwoven (Nassaney 2004). For both the Algonquian and Iroquois, colors hold sacred and symbolic meanings which serve as a connection to between the spiritual and social worlds. Red, white and black are the three main colors. The differences in color and hue can determine the desirability and importance of an object; the color and the variability of the shade of wampum are not exempt from this. White is associated with light and life itself and represents a state of well-being and a social nature (Hamell 1992). For the Narragansett it is used to represent Thunderbird, the Great Spirit. Dark colors falling under the realm of black are representative of asocial behaviors and for the Narragansett are associated with Hobbomock, the horned serpent and god of the dead. Native American cultures believe that there is a connection between items of material culture and the spirit world, and that objects can be charged with spiritual energy. As such, dark colored wampum is considered to be from Hobbomock's realm and a sachem wearing purple wampum is seen as having been given it as tribute (Fisher and Silverman 2014). It is an expression of their power. Red is associated with an anti-social nature as well as medium between the light and dark (Hamell 1992; Miller and Hamell 1986).

The Native communities in southern New England were egalitarian, and operated by a system of reciprocity at all levels (Johnson 2000; Starna 1990). They did not have chiefs, but sachems who served as the people's representative. When the exchange of wampum among the Algonquian was recorded by Giovanni da Verrazzano, Jacques Cartier and Roger Williams, they did not understand that it was a system of reciprocity practiced by the Native American communities, and believed that they were witnessing a form of native currency (Brady 2001). As they watched the exchanges they saw that purple wampum appeared to have a greater value, comparing its importance to the value of gold among Europeans that the value of white wampum was comparable to that of silver (Speck 1949). The exchange of wampum between the Iroquois and the Algonquians had been well established by this time. The importance of wampum as a ceremonial item among the Iroquois communities was not beyond their notice

either. So great was the Iroquois's desire for it that the Dutch referred to wampum "as the source and mother of the fur trade." (McBride 1994)

Early European interest in New England was chiefly in obtaining furs. The southern New England tribes, like the Narragansett, traded beaver furs until their depletion, at which time European traders began looking to inland tribes (Schultz and Tougias 2000). The furs would be shipped to England and Europe where furs were in fashion and in high demand. In wampum was the possibility of a native currency by which the English and Dutch were able to trade with the coastal tribes European goods, such as glass beads, mirrors and copper kettles for wampum. The wampum they received was then traded with the inland tribes, who had access to the furs. This has come to be known as the wampum-fur trade triangle (Fisher and Silverman 2014; McBride 1994).

Native American involvement in the European market systems occurred gradually at first. In the early seventeenth century trade between the coastal tribes and the English and Dutch was based on the reciprocal exchange of goods. Of this early phase, the Jesuit priest, Paul Le Jeune, observed that the Woodland Indians were trading in metaphor, European goods were valued as ceremonial and ideological and believed to hold the same spiritual power and association that Native American goods were believed to have (Miller and Hamell 1986). During this time English and Dutch sloops would sail into bays and rivers along the coasts of southern New England, sending smaller boats to the shores to trade with the Native communities. The New Netherland Company began trading in this way with the Wampanoag of Cape Cod, the Mohegan, living along the Thames River and the Quinnipiac, living the area of New Haven, by 1614 (Ceci 1990; McBride 1994).

In the 1620's the wampum trade began to intensify and the nature of the relationship between Native Americans and Europeans began to change rapidly from one of reciprocal exchange to colonization and dominance as the European view of wampum began to take on a more defined form of currency. Competition for control over the "mint masters" drove the Dutch and English to claim

control over tribes and their territories in an effort to gain control of the flow of this native currency (Ceci 1990). At its most stable, three purple or six white wampum were equal to one English penny and strings of wampum were sold by the fathom (Russell 1980:112). A decade later they were using warfare as a means to control the manufacture of wampum (Starna 1990). The English would create excuses for which they would be able to punish the Native Americans and extract payments of wampum from them. Between the 1631 and 1664, 21,000 fathoms of wampum had been paid to the English (Ceci 1990).

With the true intentions of the Dutch and English becoming clear, first the coastal communities followed by those living further inland become increasingly disenchanted with their trading partners. It is at this time that a shift in the material culture of Native American communities begins to occur, the symbolic associations that objects held began to wane as they were drawn into the European market economy (Miller and Hamell 1986). This change in perspective is not limited to European goods but can be seen in the changing functions of wampum as well.

This can be seen most clearly in the changing nature of intertribal and intratribal relationships at this time. As coastal tribes, such as the Narragansett and Pequots, gained strength and wealth, their neighboring tribes wanted to gain control over the trade for themselves (Ceci 1990). Wampum was changing from a spiritually charged element to a commodity to be controlled as a means to political power, strength and access to the European goods they had become accustomed to using. This heightened competition for wampum led to changes in the traditional ways of life for the tribes of southern New England (Schultz and Tougias 2000).

The role of sachem began to evolve from the role of representative to one of power as the wampum they had amassed took on a standardized value. A sachem was able to wield this power to increase the production of wampum, thus giving him even greater wealth and power to trade. The push to produce greater quantities of wampum disrupted the traditional subsistence patterns which in-

volved the cyclical movement to seasonal camps where they would hunt, fish or grow crops. As a result the Native Americans became increasingly dependent on the food provided by the English.

As the traditional ways of reciprocal exchange and seasonal subsistence patterns were being lost to the capitalistic market exchange, there were increased instances of intertribal conflicts. The need to buy more of the food and goods they were no longer providing for themselves as well as the need to pay an increasing amount in tribute to the English meant that neighboring tribes were attacking and raiding each other. During this time the Pequots were known as a wealthy and warlike people (Ceci 1990). In their attempt at obtaining more wealth, the Pequots made attempts at controlling the wampum production sites along Long Island Sound. They would also travel long distances to obtain large sums of wampum and are known to have raided wampum producing tribes on Long Island with whom they had previously had ties. (McBride 1994). The Corchaugs, located on Long Island, were subject to the extortion of wampum from the Niantics and Narragansetts (Johnson 2000).

The archaeological record shows clear evidence of this shift; prior to 1600 a site may contain a few hundred wampum beads at most. With the introduction of the metal drill bit and the push to produce large quantities of wampum, 250,000 beads may be excavated from a single cache (Fisher and Silverman 2014). Skeletal remains dated to this period of time show increased instances of death from trauma than were seen pre-contact. Changes in settlement patterns, and the construction of fortifications without immediate access to water, are observed in the archaeological record (McBride 1994).

The Contact Period in southern New England brought many changes to the traditional way of life for Native Americans, and the symbolism and uses of wampum were not exempt from this time of drastic change. By the end of the seventeenth century the English had succeeded in breaking down the symbolic, spiritual and ceremonial meanings which had characterized wampum and turned it from a symbolic connection of the spiritual world and this world into one of status and wealth.

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The Westford Pseudo-Knight

Jeffrey Max Henry

The following text is adapted from the larger publication *The Signpost: The Evolution of the Westford Knight* (Henry 2015).

Abstract:

The Westford Knight has a long and convoluted history since its first published mention in the late nineteenth century. There are no known published records on the origin of the rock face's punch carving. For more than a century, imagination and pseudoscience built the modern mythology associated with it. That mythology continues to be discussed within the town of Westford, MA, with some supporting that mythology as fact. The pseudoscience attached to the subject is largely disproved through lack of corroborating evidence. An assessment of the punch carving and other associated elements were conducted as well. Thus, the goal for this article was to create an overall survey of the data, while the larger work's goal was to build a Westford-centric history.

Introduction:

The Westford Knight is a punch carving on a rock face in Westford, MA. The artificial marks were likely created with a punch or large nail and a hammer. Other than one past historian's anecdotal account, there are no official records on its origin. As such, different, often contradictory theories were attached to it. The most extravagant theories are from the realm of pseudoscience, which proposes that it is an incomplete depiction of a fallen knight from Medieval Scotland. The subject brings to light a significant and cyclical issue between science and pseudoscience. This issue is that the scientist debunks and moves on to the next project, while the pseudoscientist ignores the scientist, assuming they no longer support the debunking. However, the goal of this article was to outline the history of the topic, while providing a means of proper presentation. The Westford Knight pro-

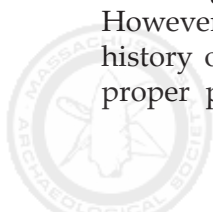
vides an important look into the evolution of a pseudoscientific theory, while showing its importance to a town's history.

The Earliest References:

Prior to 1874, there are no official records of Westford's punch carving, while it was known within the town. Other than being a punch carving, what it represents is not materially known with certainty. As such, meanings of what the carving is were ascribed without solid facts. Based on the earliest ascription, Elias Nason noted it in his 1874 *Gazetteer* (Nason and Varney 1890 [1874]: 686), and providing a similar description, Edwin Hodgman noted it in his 1883 *History of the Town of Westford*. Hodgman described it as "the work of indians." [sic] He stated that the rock face "... has upon its surface grooves made by glaciers in some far off glacial age." The artificial marks were described, specifically attributions of a human face (Hodgman 1883: 237). It should be noted that punch marks are not specifically referenced by either author.

Beginnings of an Alternative Theory and a Professional Response:

In 1950, amateur archaeologist and postmaster Frank Glynn read a 1946 book by amateur historian William Goodwin, who included a brief mention of the punch carving in Westford (Figure 1) (Glynn 1957: 11). Goodwin's book provided the earliest available picture of the rock face, and was the first to theorize non-local origins, which were Viking in this case (Goodwin 1946: 54, 362-363). Developing an interest, he mentioned the subject in correspondence to Thomas Charles Lethbridge, then of Cambridge University, by 1954. Glynn, assuming Goodwin's theory had some validity, needed Lethbridge's opinion (Westford Knight Shelf, Lethbridge Correspondence, J.V. Fletcher Library, Westford MA).



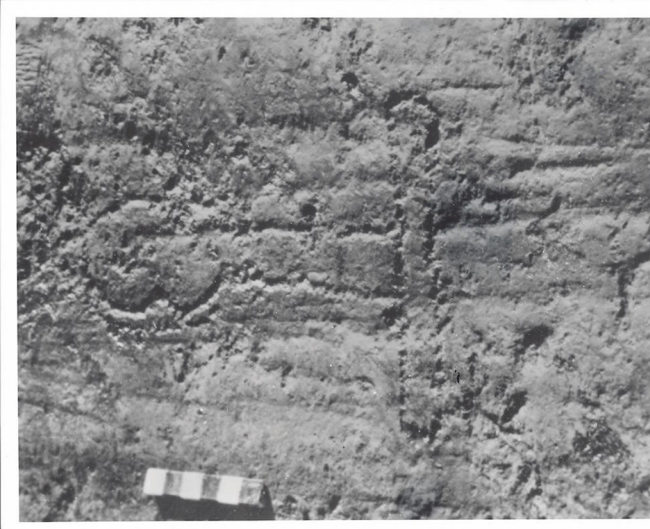


Figure 1. Early, undated picture without chalk outline. Image nearly identical to one in Goodwin's book (Westford Knight Archive, Westford Museum and Historical Society).

In his letter, Lethbridge provided his own theory to Glynn. Speculating that the overall image might be unfinished, Lethbridge stated that there was more than just a "broken sword." In detail, Lethbridge continued that a complete knight was holding the sword, which was a hand and a half pommel sword (longsword) from as late as the fourteenth century. He also presented the theory that it was one of "Sinclair's Men" (Westford Knight Shelf, Lethbridge Correspondence, J.V. Fletcher Library, Westford MA).

Lethbridge was referring to the Zeno Narrative, with a loose interpretation of it supported by philosopher and historian John Fiske. This narrative was published in 1558 by a descendent of Venetian navigators Antonio and Nicolo Zeno. The narrative contained a map claiming to be from 1390, along with an account of a voyage across the ocean (Fiske 1892: 229-250). The map and the overall narrative are often described as a fabrication, and are academically deprecated. As forwarded by maritime historian Samuel Morrison, Frederick Lucas' more literal 1898 translation and interpretation showed that it was not a reputable work. The narrative and map contained numerous inaccuracies like nonexistent islands and a Prince, who may

have been inspired by the Baltic pirate Wichmann. Loose interpretations led to assumptions that the Prince was, inexplicably, Scottish Earl Henry Sinclair of Orkney, who led a forgotten voyage to North America around 1398. There is no corroborating evidence that the Earl traveled with the Zeno Brothers, while the narrative only shows the voyage going as far as Greenland (Morison 1971: 84-87).

Without seeing the narrative as a fabrication, Lethbridge insisted that Glynn find the punch carving. Glynn located it in 1954. As recommended by Lethbridge, Glynn's work included stripping back the dirt on the rock face (Glynn 1957: 11). Lethbridge provided detailed sketches of what Glynn was supposed to outline. The sketches included a face, helmet, skirt, shield, etc. Lethbridge was pleased with the pictures mailed to him by Glynn by 1956 (Westford Knight Shelf, Lethbridge Correspondence, J.V. Fletcher Library, Westford MA).

The early conclusions of Glynn's work, largely given to him by Lethbridge, were published in the *Eastern States Archaeological Federation Bulletin* as "A Unique Punch Portrait in Massachusetts." In the report, he specifically stated there was a "life-sized portrayal of a 14th century knight in full-length surcoat," and that the image was "referable" to Medieval military effigies (Figure 2). He did concede that it was a unique execution (Glynn 1957: 11). However, significant issues with the theory, like the lack of corroborating evidence, went unmentioned in the report, as did any likely detractors. The Zeno Narrative went unmentioned as well.

One significant detractor was archaeologist William Fowler, who published a report in the 1960 *Bulletin of the Massachusetts Archaeological Society*. It was called "The Westford Indian Rock." The research was done at the request of Westford resident Arthur Hildreth. While Glynn's interpretation was based on an elaborate chalk outline, Fowler argued that much of that outline was inaccurate. Instead, Fowler worked to distinguish between natural weathering and artificial marks. He found the two types of markings easily distinguishable (Fowler 1960: 21-22).

The resulting interpretation was very different from Glynn's. Instead, Fowler theorized that the image was depicting a tomahawk, the dimensions of which roughly corresponded to tomahawks used during the French and Indian Wars (Figure 3). That led Fowler to date the punch carving to between 1700 and 1750, and he attributed its creation to an early European settler. The dimensions are specifically similar to one carried by William Denison of Rhode Island between 1740 and 1748 (Fowler 1960: 21-22).

Fowler went on to discuss how the image could not be a sword, let alone that of a Medieval knight. He noted that the theorized hilt was asymmetrical, providing evidence that it is not a sword. Fowler claimed that the head above, which was imagined, was instead due to natural frost pitting. Both the false and real images are what led to the original moniker "Indian Rock" (Fowler 1960: 21-22). It

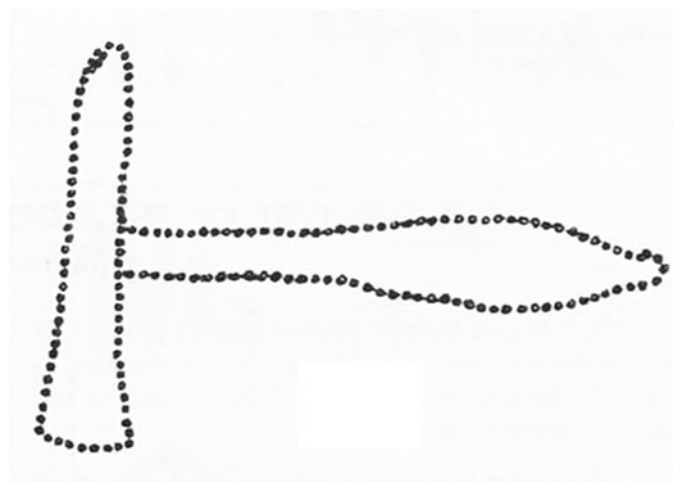


Figure 3. Fowler's Interpretation (*MAS Bulletin* 21(2): 21-22).

should be noted that William Fowler's interpretation is rarely cited after its publication, let alone used as evidence against the theory presented by Glynn and Lethbridge.

Unaware of or ignoring William Fowler's interpretation, Glynn continued to push his uncorroborated research. His second article, again through the *Eastern States Archaeological Federation Bulletin*, was called "A Second Medieval Marker at Westford, Massachusetts." This time he cited the Zeno Narrative as a confirmation of his conclusions (Glynn 1967: 14). He also described an eponymous marker, which is commonly known as the "Boat Stone." This marker has carved on it a number, arrow, and boat. (Figure 4) This stone existed as far back as 1849, and was used as a means to mark property lines (Hayden and Hampson 1849). Also, stone markers were not always quarried (Gage and Gage 2015: 147). Having similar markings to known granite markers in the area (Figure 5), the small granite boulder should fit into the context of the Colonial period or after.

However, Glynn was told by Lethbridge to use the Boat Stone as a means of locating an encampment site, in spite of the fact that the stone's exact, original location was not known. Glynn eventually stumbled upon a small stone enclosure (Glynn 1967: 14). In spite of being told that it was once an animal pen by the property's owners (Trubey 1989: 25), Glynn insisted that it was a Medieval



Figure 2. Elaborate chalk outline on rock face by Glynn (Westford Knight Archive, Westford Museum and Historical Society).



Figure 4. The Boat Stone as Exhibited at the Fletcher Library. "(Photo published by permission of the Trustees of the J.V. Fletcher Library,

encampment site. (Glynn 1967: 14) Further research by Glynn, such as it was, ended soon after the publication of the second article, due to his death in 1968 (Trubey 1989: 25).

Personal examination by the author of the roofed enclosure and adjacent foundation suggest they were built after 1826, while Glynn clearly did not discuss the adjacent roofed structure in his second article. Corroborating material evidence of the foundation's use as an animal enclosure are the large granite slabs, which were common in house and barn construction (Figure 6). The roofed enclosure was likely a root cellar (Figure 7), one of only two in New England featuring a stone slab roof (Figure 8). Quarrying marks are visible along the larger blocks and slabs, including the support column within the enclosure (Figure 9). These marks correspond to the flat wedge method, which was developed not long before 1800 (Gage and Gage 2015: 44-49, 79-99, 308). As a distinct business, stone quarrying began in Westford after 1826, while quarrying on the nearby Snake Meadow Hill began after 1847 (Hodgman 1883: 246). If the structures represent an encampment site from a Medieval expedition, they would suggest a significant colonization effort and intent. Numer-



Figure 5. Granite Marker at Boston Rd Residence. Photographed by Jane Hinkley in 1997 (Westford Historical Commission Photos 1998).

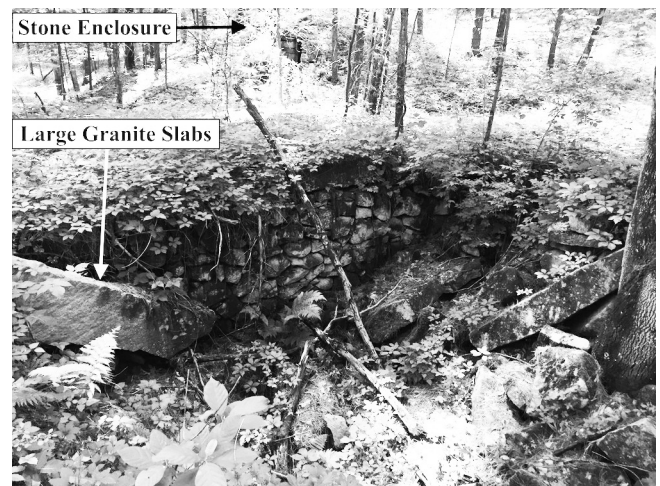


Figure 6. Adjacent Foundation.

ous workers with the appropriate tools are necessary to cut and move large pieces of granite. Significant quarrying operations are not known prior to the early nineteenth century in Westford. Further, the earliest example of the flat

wedge method is from 1800 (Gage 2015: 2-27). It seems unlikely a Medieval expeditionary force from Scotland would have the intent to create permanent structures, or the skill to quarry stone with a method developed 400 years later.



Figure 7. Roofed Enclosure Exterior.

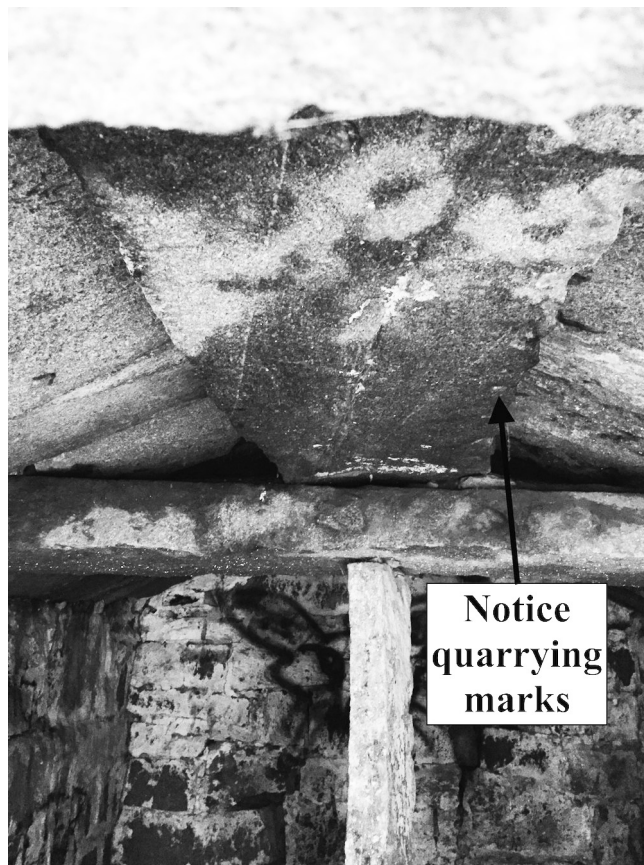


Figure 8. Roofed Enclosure Interior.



Figure 9. Roofed Enclosure Support Column.

The Waxing and Waning of a Modern Myth

By 1976, the punch carving, interpreted as a Medieval knight, was important enough for the Westford government to allow the Bicentennial Committee time to erect a monument for the site. Funds were not appropriated for this monument, however. The committee was originally headed by Alister MacDougal (Westford Town Clerk 1976), who was an amateur historian and Westford Knight adherent. Roland Sinclair, a member of the clan Sinclair, gave incentive for the project after visiting the site while traveling between London and the Caribbean. The monument at the site, which was donated by the Barretto Granite Company, is a granite marker detailing the theorized expedition led by Henry Sinclair (Figure 10a and b). MacDougal led the event. Fifty-eight people attended, including MacDougal, Roland Sinclair, the President of the Westford Historical Society, the Chairman of the Westford Board of Selectmen, Dennis Bar-

retto, and Ken Harkins of the Sinclair Family. The article also stated that Roland Sinclair brought a parchment with the Sinclair Arms signed by Queen Elizabeth II of England. The Arms are reproduced on the marker, which commemorates on the supposed voyage of Earl Sinclair (*Westford Eagle*, 16 Dec 1976).



Figure 10a & b. Photos taken in 1980. (a) Rock face with 1976 monument. (b) Painting of shield on rock face (Westford Knight Archive, Westford Museum and Historical Society).

By 1989, interest in the punch carving waned according to the Westford Historical Society President Alexander Belida, who was interviewed by now archaeologist David Trubey. Belida specifically blamed this waning on the growing commuter lifestyle, even though the punch carving could still be a topic of heated debate (Trubey 1989: 34). Though usually avoiding this debate, past reporter and local historian Gordon Seavey mentioned the subject in his article on local folklore. He never supported the theory of Medieval origins. Glynn merely drew chalk outlines on a rock, Seavey explained. Adelaide Fisher Buckshorn, who lived

close to the rock face, explained to him when he was younger how her siblings played not only on the rock, but also made the markings in the late nineteenth century. With the granite marker at the site, Seavey recommended to use good judgement while visiting (*Westford Eagle*, 5 Oct 1989). While the image is arguably that of a tomahawk, as William Fowler theorized, the dating is still noticeably different.

The 1990s did see a resurgence of interest and debate. 1991 specifically saw businessman Niven Sinclair, a prominent supporter and Clan Sinclair member from Scotland, commission artist Marianna Lines to create a new image of the punch carving. She used a variety of extracts and dyes with a picture of Glynn's chalk outline as her guide (Ginn 2009: 1,6-8; Ferney 1991). The resulting image was arguably more a result of the picture and imagination, rather than what was extant on the rock (Figure 11).



Figure 11. Marianna Lines' Alternative Rubbing (Westford Knight Archive, Westford Museum and Historical Society).

This decade also saw an evolution of the mythology with theorized connections to the Knights Templar, often promoted by members of the Sinclair family (Sinclair 1992; Cahill 1993). By 1994, archaeologist Stephen Nicklas, then of the mold making company PFR Reproductions, was contracted by the Clan Gunn Society of America to create a mold of the punch carving (Koehler 1994: 6). Controversially, he argued that the punch marks represented a sword of Scottish origin (Nicklas, letter, 1994, Westford Knight Archive, Westford Museum and Historical Society, Westford MA). The fact that the image is asymmetrical, as William Fowler stated as evidence of it not being a sword, went unmentioned. The lack of corroborating evidence went unmentioned as well.

By 1997, local historian Brad Parker organized a study against the misidentification of the Westford Knight. It was in response to a proposed BBC documentary. Parker was “embarrassed for the town.” He worked with geologists from the University of Massachusetts, Lowell, Arnold O’Brien and Richard Gore, and genealogist Michael Gunn, who is associated with the Clan Gunn. He also used a paper written by Shetland Archivist Brian Smith (*Lowell Sun*, 19 Dec 1997). The documentary mentioned in the article is either no longer available or was never made.

O’Brien and Gore stated that the indistinct “hilt” punch marks were the only artificial features, while the rock was soft enough to punch holes without special tools (O’Brien, Gore to Parker, letter, 6 Oct 1997, Westford Knight Archive, Westford Museum and Historical Society, Westford MA). Michael Gunn stated that the figure now by some thought to be the Knight, James Gunn, did not exist, and there was no mention of a Sinclair voyage in the genuine historical records (Gunn to Parker, letter, 6 Nov 1997, Westford Knight Archive, Westford Museum and Historical Society, Westford MA). Like Michael Gunn, Brian Smith stated that there are no historical records detailing a Sinclair voyage, while the Zeno Narrative and map does not depict a reliable historical account (Smith 2002 [1997]).

Late in the same year, the independent Westford Knight Committee put forward an effort to place the punch carving on the National Register of Historic Places. While officially neutral on the subject, the town’s Historical Commission supported the effort out of their support for continued research. That ef-

fort was ultimately a failure. A letter from Massachusetts Historical Commission staff archaeologist Leonard Loparto stated, “...There is no scientific or scholarly evidence to support the theory that the carvings were made by Scottish visitors in the Medieval period” (Loparto to Collins, letter, 1998, Westford Historical Commission, Westford MA). The response showed the continued understanding that evidence like the Zeno Narrative is invalid. However, the site was designated as part of the Westford Center Historical District in 1998 as WSR.919 (Massachusetts Historical Commission 2015). It is not stated on the listing if the designation was connected to the otherwise failed effort, nor is it listed in the associated National Register Historic District form.

Contemporaneous with the failed effort in 1998, Harvard Peabody Collections Manager David Schafer independently conducted his own research on the topic on a pro bono basis for a Westford resident (David Schafer, personal communication 2015). Independent researcher Doug Weller posted the “Preliminary Report” on his archaeology website, and it is in Schafer’s words with his permission. The date of posting is not available (Schafer, Weller).

Schafer’s report argued that the Lethbridge-Glynn interpretation was incorrect. It also argued that William Fowler’s interpretation was as “fanciful” and incorrect as Glynn’s. The only artificial image was the “T-Shape,” while the rest was due to natural weathering. Schafer was supportive of the possibility that it was done in the late nineteenth century by local children, but did not speculate whether the image was meant to represent anything more than a “T-Shape” (Schafer, Weller). A full reference page for the report is not available, due to the posting originating as an e-mail to Doug Weller. Schafer opted to not publish the full report due to various constraints, including daily e-mails from adherents disagreeing with the summary report posted by Weller (David Schafer, personal communication 2015).

By late 1998, Westford school children were involved with celebrations to commemorate the approximate 600th anniversary of the supposed Sinclair voyage. They specifically created posters

for the planned festivities. (Prince Henry Project Committee 1998; Daniel 1998). However, by 1999, interest in the subject had again waned. Throughout the decade, an effort was made to recreate the supposed voyage by building a replica Medieval vessel. The effort was largely unsuccessful. According to archived correspondence between Rory and Niven Sinclair, donations from the North American side of the project were far less than expected. Less than expected enthusiasm and time constraints were other factors suggested. However, a scale model of a Medieval vessel was completed (R Sinclair to N Sinclair, email, 4 Aug 1999, Sinclair Family Discussion List Archive, <http://sinclair.quarterman.org/archive/1999/msg02501.html>). Further information on this scale model, including where it is today, is not readily available.

Recent Developments

In 2013, an independent film *American Templars*, which is adapted from the fictional novel *Cabal of the Westford Knight* by David Brody, was released to some fanfare (*The American Templars* 2015; Brody 2009). In relation to the film, the Westford Museum created a temporary exhibit detailing both the pseudoscience and real science related to the subject. The exhibit was adapted into a permanent one.

The next year, local artist and firefighter David Christiana designed a new “monument” for the site (*Lowell Sun*, 25 Mar 2014). It was unveiled on June 13 of the succeeding year. The 1976



Figure 12. 2015 Monument.

marker was pushed back, while a glass covering was placed over the punch carving. A new information sign and life size statue of a knight were placed there as well (Figure 12). Representatives from the clans Sinclair and Gunn were present (LS, 14 June 2015). Overall attendance was not stated in the article.

A New Theory and Conclusion

One of the most significant aspects of the Westford Knight mythos is how legitimate researchers proposed similar but different theories on the punches' origin. Nason and Hodgman suggested it was the work of Native Americans with outlines of a human face, William Fowler theorized it was a tomahawk made prior to 1750 by an early settler, Gordon Seavey stated it was done by school children in the late 1800s, and David Schafer largely agreed with only Seavey.

In June of 2015, anthropologist Jason Colavito theorized that the punch marks did not exist until after Hodgman mentioned the rock face in 1883. He pointed out that artificial punch marks are not specifically mentioned by either Nason or Hodgman. It is more than possible that the punches were later created by children, having been inspired by the story (Colavito 2015). The first specific mention of any punch marks came in 1946 with a brief mention in William Goodwin's *The Ruins of Great Ireland in New England* (Goodwin 1946: 54, 362-363). As mentioned, it was Goodwin's book that made Glynn interested in what became known as the Westford Knight.

The theory of the punch carving being made after 1883 does contradict William Fowler's dating of the markings, but they are arguably without context. Assuming the punches indeed represent a tomahawk, it is reasonable to suggest that was the main image the children meant to create after the story of the rock face gained a larger audience. Goodwin then placed a picture of it in his book, which inspired Glynn to study it with the guiding hand of Lethbridge. Finally, Lethbridge theorized that the image was a Medieval Scottish knight, and that theory was promoted by Glynn. The mythos of the Westford Knight comes into focus.

The mythos of the Westford Knight provides a view into the development of a modern myth, while showing its significant place in a town's history. However, there has yet to be any serious, official archaeological work done at the sites related to the subject. While not necessarily a baffling subject for academia, superfluous details deriving

from poor scholarship were piled onto the subject, making it easy to dismiss. There is, however, a distinct truth to the subject, a truth that is not fully material. This truth is that the Westford Knight is a punch carving in Westford, MA, with vague origins, and the overall mythos is an integral part of the town's past and future cultural identity.

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Contributors

GRACE BELLO recently graduated from Bridgewater State University as a student of Dr. Curtiss Hoffman. She has been volunteering at the Robbins Museum for the past three years. She has presented her research at a myriad of conferences across the United States, such as at the Eastern States Archaeological Federation's 2014 Annual conference and the 2015 National Collegiate Undergraduate Research Conference. In the future she plans to continue her education by attending graduate school for archaeological studies.

JEFFREY MAX HENRY of Westford is a museum professional and independent researcher. He has a degree in Anthropology from Franklin Pierce University. His main subjects were in New England Archaeology and History. Since graduating in 2009, Jeffrey participated in archaeological digs in Maine and Massachusetts. He has since shifted to museum work, particularly historical research and collections management. Major research interests include local history, mythology, and Contact and Colonial New England. His research for the Westford Museum has been a part of multiple exhibits. He may be contacted via email: npjh1987@verizon.net.

WILLIAM MOODY, a graduate of Tulane University, is a member of the Massachusetts Archaeological Society. He has had a keen interest in prehistoric American archaeology since discovering his first projectile point on his grandfather's farm in Florida over 50 years ago. He has contributed numerous articles to various archaeological journals and forums as well as to the *Bulletin of the Massachusetts Archaeological Society*.

EMILY RUX is in her senior year of college at Bridgewater State University, where she is majoring in Anthropology with a concentration in Public Archaeology. Her article was written as part of a Directed Study course that she took with Dr. Curtiss Hoffman during the Fall of 2014.

NOTES TO CONTRIBUTORS

The Editor solicits for publication original contributions related to the archaeology of Massachusetts. Authors of articles submitted to the *Bulletin of the Massachusetts Archaeological Society* are requested to follow the style guide for *American Antiquity* (48:429-442 [1983]). Manuscripts should be sent to the Editor for evaluation and comment at c1hoffman@bridgew.edu.

Manuscripts should be submitted as electronic files (preferably MicroSoft Word .doc or .docx files, or .rtf files). All text should have margins of 3 centimeters (1¼ inch) on all edges. For electronic files, do not insert artificial spaces between lines; instead, use the Format/Paragraph/Line Spacing function and select "Double". Proper heading and bibliographic material must be included.

Bibliographic references should be listed alphabetically by author's last name and presented as follows:

Gookin, Daniel

1970 *Historical Collections of the Indians of New England* (1674). Jeffrey H. Fiske, annotator.
Towtaid, Worcester, MA.

Several references by the same author should be listed chronologically by year. Reference citations in the text should include the author's name, date of publication, and the page or figure number, all enclosed in parentheses, as follows: (Bowman and Zeoli 1973:27) or (Ritchie 1965: Fig. 12). All information derived from published sources must be cited, whether it is directly quoted or paraphrased. Please check to make sure that citations in the text match bibliographical entries, especially dates of publication.

All illustrations and tables, called figures, must be submitted as electronic originals. Tables should be submitted as separate Excel (.xls or .xlsx) spreadsheets and not incorporated into the text. Figures should be submitted as either .tif or .jpg files, high contrast, in greyscale. Each figure should fit within the space available on a *Bulletin* page, which is 17 cm by 23 cm (6½ x 9 inches), allowing for margins. Full, half or quarter page figures should be planned carefully. Space must be allowed for captions. Captions should be in title case and should accompany the text in a separate section, in order and numbered to correspond to the figures.

Figures must be referred to in the text and are to be numbered in their order of reference, with their number indicated in the file name. Every item in each figure and each person should be identified. All lettering must be clear and legible. Scales with dimensions, preferably in metric measurements, should be included with all figures for which they are appropriate.

Dimensions and distances should be given in metric units or in metric units and English units, to the same standard of accuracy (e.g., 10 cm or 2.5 inches, not 2.54 inches).

Authors should include a brief (1 paragraph) biography for the "Contributors" page of the *Bulletin* issue.



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